

In the Claims:

Please amend the original claims as follows:

2. (amended) Antifreeze polypeptides comprising one or more fragments (A-E) of the amino acid sequence as follows:

SEQ ID NOS. 1-5, respectively, in order of appearance

- (A) LEU-PRO-ASN-LEU-PHE-GLY-LYS
- (B) ILE-PRO-GLU-GLU-ILE-SER-ALA-LEU-LYS
- (C) LEU-THR-X-LEU-ASP-LEU-SER-PHE-ASN-LYS
- (D) SER-LEU-ARG-LEU-SER-SER-THR-SER-LEU-SER-GLY-PRO-VAL-PRO-LEU-PHE-PHE-PRO-GLN-LEU-X-LYS
- (E) X-X-GLY-VAL-ILE-PRO-X-GLN-LEU-SER-THR-LEU-PRO-ASN-LEU-LYS

and isoforms or derivatives thereof

4. (amended) Antifreeze polypeptides having an amino acid sequence as represented in Listing 1 SEQ ID NO. 7 and isoforms and derivatives thereof.
5. (amended) An isolated nucleic acid sequence encoding the antifreeze polypeptide of one or more of claims 1-4 claim 2 and alleles thereof.
6. (amended) An isolated nucleic acid sequence substantially corresponding to the gene sequence of Listing 1 SEQ ID NO. 6 and alleles thereof.

7. (amended) Method of obtaining polypeptides according to ~~one or more of claims 1-4~~
~~claim 2~~ whereby the polypeptide is isolated from cold-acclimatised carrots.
8. (amended) Method of obtaining polypeptides according to ~~one or more of claims 1-4~~
~~claim 2~~, whereby the polypeptide is expressed by a genetically modified organism.
10. (amended) An antibody capable of specifically binding the polypeptide of ~~claim 1, 2, 3 or 4~~
~~claim 2~~.
11. (amended) A polypeptide that is immunologically related to the polypeptide of ~~claim 1, 2, 3 or 4~~
~~claim 2~~ as determined by its cross reactivity with an antibody of claim 10.
12. (amended) Food product comprising a polypeptide of ~~claim 1, 2, 3, 4 or 11~~
with the proviso that the food product is not a carrot containing the polypeptide at
naturally occurring levels.
14. (amended) Method of producing a food product comprising an antifreeze polypeptide
according to ~~one or more claims 1, 2, 3 or 4~~, ~~claim 2~~ comprising the steps of
(a) adding to the food product a composition comprising said antifreeze polypeptide;
or
(b) in situ production of said antifreeze polypeptide.
15. (amended) Use of the polypeptide of ~~claims 1, 2, 3 or 4~~
~~claim 2~~ for increasing the frost tolerance of plants.
16. (amended) Microorganisms, cell line or plant capable of expressing the polypeptide of
~~claims 1, 2, 3 or 4~~
~~claim 2~~, with the proviso that the plant is not an unmodified carrot plant.

CLEAN VERSION OF THE ENTIRE SET OF PENDING CLAIMS

1. Antifreeze polypeptides which can be obtained from carrots and which have an apparent molecular weight on SDS-PAGE of 36 kDa and isoforms or derivatives thereof.
2. Antifreeze polypeptides comprising one or more fragments (A-E) of the amino acid sequence as follows:

SEQ ID NOS. 1-5, respectively, in order of appearance

- (A) LEU-PRO-ASN-LEU-PHE-GLY-LYS
- (B) ILE-PRO-GLU-GLU-ILE-SER-ALA-LEU-LYS
- (C) LEU-THR-X-LEU-ASP-LEU-SER-PHE-ASN-LYS
- (D) SER-LEU-ARG-LEU-SER-SER-THR-SER-LEU-SER-GLY-PRO-VAL-PRO-LEU-PHE-PHE-PRO-GLN-LEU-X-LYS
- (E) X-X-GLY-VAL-ILE-PRO-X-GLN-LEU-SER-THR-LEU-PRO-ASN-LEU-LYS

and isoforms or derivatives thereof

3. Antifreeze polypeptides comprising the fragments (A-E) of claim 2.
4. Antifreeze polypeptides having an amino acid sequence as represented in SEQ ID NO. 7 and isoforms and derivatives thereof.
5. An isolated nucleic acid sequence encoding the antifreeze polypeptide of claim 2 and alleles thereof.

6. An isolated nucleic acid sequence substantially corresponding to gene SEQ ID NO. 6 and alleles thereof.
7. Method of obtaining polypeptides according to claim 2 whereby the polypeptide is isolated from cold-acclimatised carrots.
8. Method of obtaining polypeptides according to claim 2, whereby the polypeptide is expressed by a genetically modified organism.
9. Method according to claim 8, whereby the organism is a microorganism, a plant or a cell culture.
10. An antibody capable of specifically binding the polypeptide of claim 2.
11. A polypeptide that is immunologically related to the polypeptide of claim 2 as determined by its cross reactivity with an antibody of claim 10.
12. Food product comprising a polypeptide of claim 2 with the proviso that the food product is not a carrot containing the polypeptide at naturally occurring levels.
13. Food product of claim 12 being a frozen confectionery product or a frozen vegetable.
14. Method of producing a food product comprising an antifreeze polypeptide according to claim 2 comprising the steps of
 - (a) adding to the food product a composition comprising said antifreeze polypeptide; or
 - (b) in situ production of said antifreeze polypeptide.
15. Use of the polypeptide of claim 2 for increasing the frost tolerance of plants.
16. Microorganisms, cell line or plant capable of expressing the polypeptide of claim 2, with the proviso that the plant is not an unmodified carrot plant.